



Innovator In Spectroscopy Equipment

## DIGITAL MULTI CHANNEL ANALYZER USB BASE MODEL 2010





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### Features:

- Plug onto PMT
- Many PMT pin outs supported
- Control PMT high voltage
- Measure pulse energy, arrival time, triggering
- Measure perform pulse shape analyzer
- Three variants: USB, (Optional CAN, RS485, Rs232)
- Active divider for highest linearity (Optional)



### Description:

The MCA-base consists of a CFP multichannel analyzer and an integrated high voltage generator and divider to power the photomultiplier (PMT). It plugs directly onto the PMT and can be powered and controlled via USB.

The high voltage divider can deliver 50 $\mu$ A DC current and 10mA pulse current to the PMT anode while maintaining excellent gain stability.

The device is sealed and specified over a temperature range of -15°C to +50°C.

### Specifications:

#### Construction:

- MCA and high voltage unit are integrated into a single housing. The MCA-Base is potted and fully sealed.

#### Connectors:

- PMT: 14-pin socket for DMCA2010 base. Multiple PMT pin outs and custom pin outs are available.
- USB: USB and mini-B USB connector. Thread lock is available (OPT).
- GPIO: 8-position connector with bayonet locks (OPT).

#### MCA:

- USB-powered and controlled
- Digital-signal processing MCA
- Using waveform digitizing ADCs
- 10• -bit/20MSPS (power saver) to 12-bit/80MSPS (high performance)
- One unit is suitable for all scintillators by varying programmable parameters
- 4096• x 32-bit histogram memory
- Very high maximum histogramming rate, up to 1Mcps (periodic)

#### Optional extended Functionality:

- Trace acquisition for oscilloscope-like display, 1024 samples
- List mode data acquisition stores energy, time-of-arrival and (optional) pulse shape parameter on event-by-event basis
- Real-time pulse shape discrimination



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- **High voltage unit:**

- Between 0 to 1500 V, positive or negative, programmable in 1V steps.
- Transistorized divider for highest linearity at lowest power consumption. (OPT)

- **Power consumption:**

- Depending on ADC and speed: between 200mA to 400mA at 1000 V.

- **Operating conditions:**

- Temperature: -15oC to +50oC

- **Software:**

- CFP-Pro / DAQ for evaluation software

- **DMCA BASE 2010 REV1.0 100120-001**

### Port configuration:

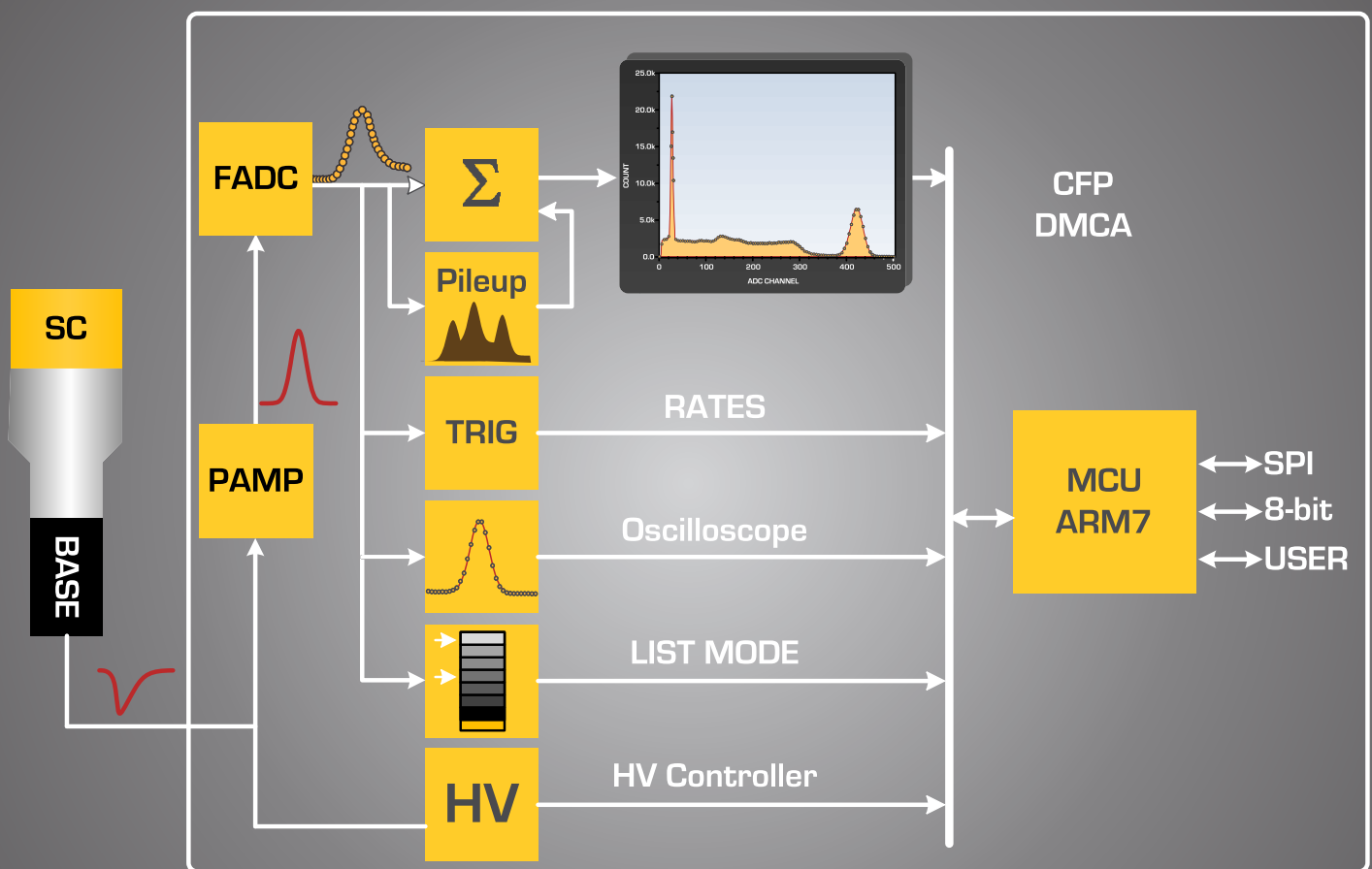
- RS - 232
- USB Port
- LEMO 6 Pin
- LAN





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# DIGITAL MCA BASE USB MODEL 2010



DMCA BASE 2010 BLOCK DIAGRAM

